SUN VACUUM TESTER
INSTRUCTIONS

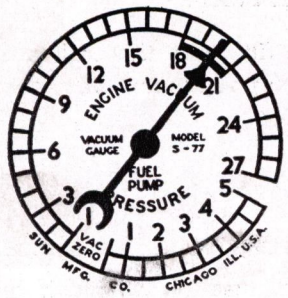


FIGURE 15

With motor at idling speed vacuum pointer should hold steady between 17 and 21.

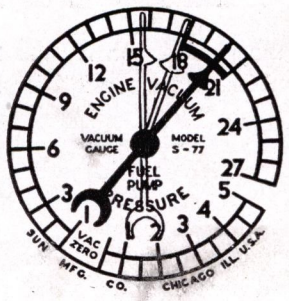


FIGURE 16

With motor at idling speed dropping back of vacuum pointer indicates sticky valves.

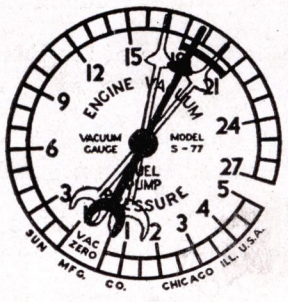


FIGURE 17

With motor at idling speed floating motion right and left of vacuum pointer indicates carburetor too rich or too lean.

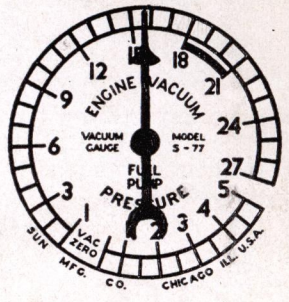


FIGURE 18

With motor at idling speed low reading of vacuum pointer indicates late timing or intake manifold air leak.

TEST CARBURETION AND ENGINE EFFICIENCY

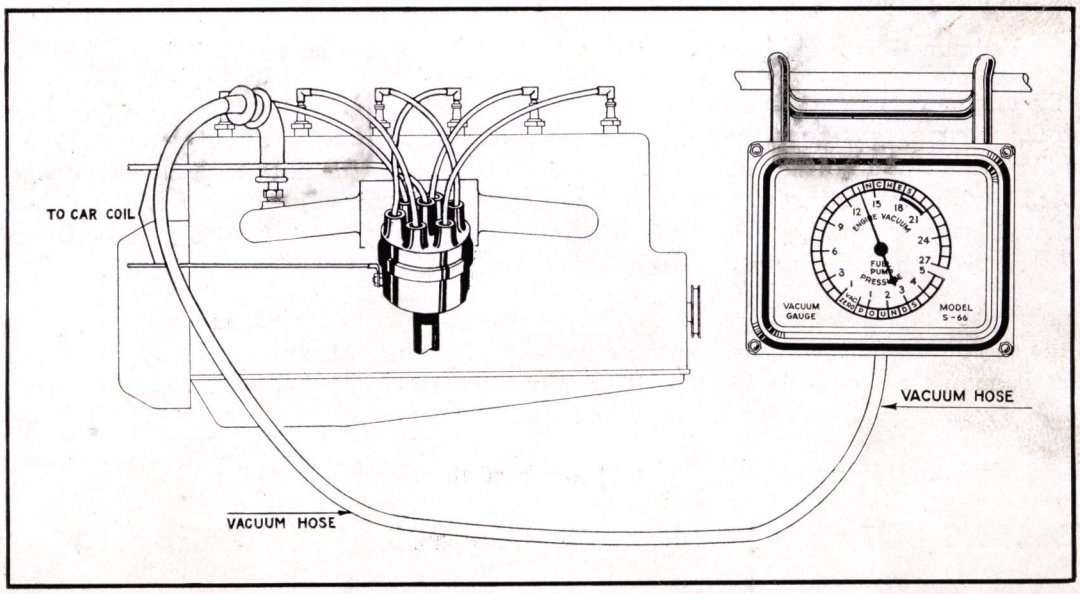
Attach Vacuum Gauge Hose direct to Intake Manifold, using the fitting necessary, and be sure to make a tight connection.

Start engine running at idling speed of 7 to 10 miles per hour. If the idling adjustment of the Carburetor is correct, Spark Plugs are all firing, the Valve action is perfect, no Intake Manifold air leak, Valve and Distributor timing correct, with a normal running engine at idling speed, the Vacuum Gauge indicating hand will read between 18 and 21 inches and hold steady, or have a very slight flutter.

But, if the Vacuum Gauge indicating hand does not hold steady between 18 and 21 inches, or have a very slight flutter, it indicates that the carburetor idling adjustment is not correct, some of the Spark Plugs are not firing, Valves sticking, Valve seats burned, Valves adjusted too tight, Intake Manifold air leak, Distributor timing incorrect, or Valve timing incorrect.

ADJUST CARBURETOR AT IDLING SPEED

Turn the idling adjustment screw on Carburetor right or left until the Vacuum Gauge indicating hand reads its highest steady point for correct idling adjustment. If, in turning the Carburetor idling adjustment right or left, the Vacuum Gauge indicating hand cannot be made to drop to the left, it indicates that the Carburetor idling adjustment is not working correctly, which in most cases is due to a dirty Carburetor. Remove Carburetor, clean, and set to factory specifications.



TEST FUEL PUMP SUCTION AND PRESSURE

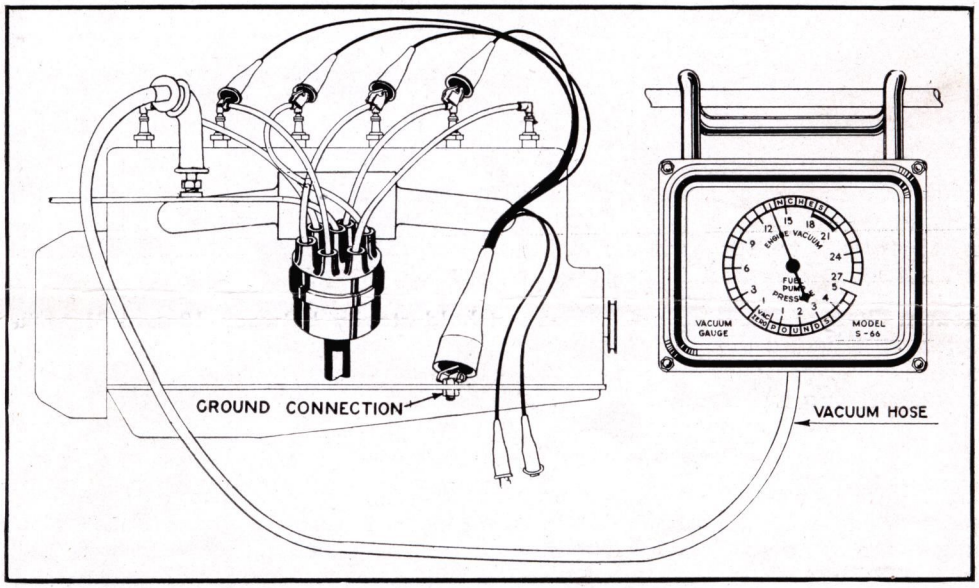
Remove the gasoline line from the tank side of the Fuel Pump, and also from the Carburetor side of the Fuel Pump. Push rubber fitting on Fuel Pump Tester Hose over the fitting on the tank side of the Fuel Pump, which is the suction side. Start engine and run engine at idling speed, and the vacuum reading should be 6 inches or better for satisfactory suction action of the Fuel Pump.

Remove hose fitting from the tank side of the Fuel Pump and push it over the fitting on the carburetor side of the Fuel Pump, and the pressure reading should be between 2¼ and 3½ pounds for satisfactory Fuel Pump pressure.

Consult factory specifications for the pressure recommended by the car manufacturer for the type of Fuel Pump you are testing.

Too low a pressure will cause a high speed miss because of lack of fuel delivered to the Carburetor. Too high a pressure will cause Carburetor to flood and poor gas mileage because of too much gas being delivered to the Carburetor.

CYLINDER BALANCE



1.—Set engine throttle until engine is running at about 20 M.P.H.

2.—Connect Vacuum Gauge Hose and Cylinder Balance Tester as shown.

3.—With the engine running on number one and six cylinders note the reading on vacuum gauge. After noting the vacuum reading when running on number one and six cylinders in a six cylinder engine make the same test on all the rest of the cylinders by moving number two clip to number one and number five to number six. You will then be running the engine on number two and number five cylinders. Next move number three clip to number two and number four to number five. You will then be running on number three and number four cylinders.

4.—In running the engine in banks of two cylinders at a time as outlined, the vacuum gauge should read the same on each bank without more than one inch difference between any two pairs of cylinders. If one pair of cylinders reads lower than the other pair it indicates either a spark plug that is missing or unequal compression in a cylinder.

If service is required on the Sun Fuel Pump Tester, mail the entire unit to the

SUN ELECTRIC CORPORATION, 6323 Avondale Ave., Chicago 31, Illinois